

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
1 December 2005 (01.12.2005)

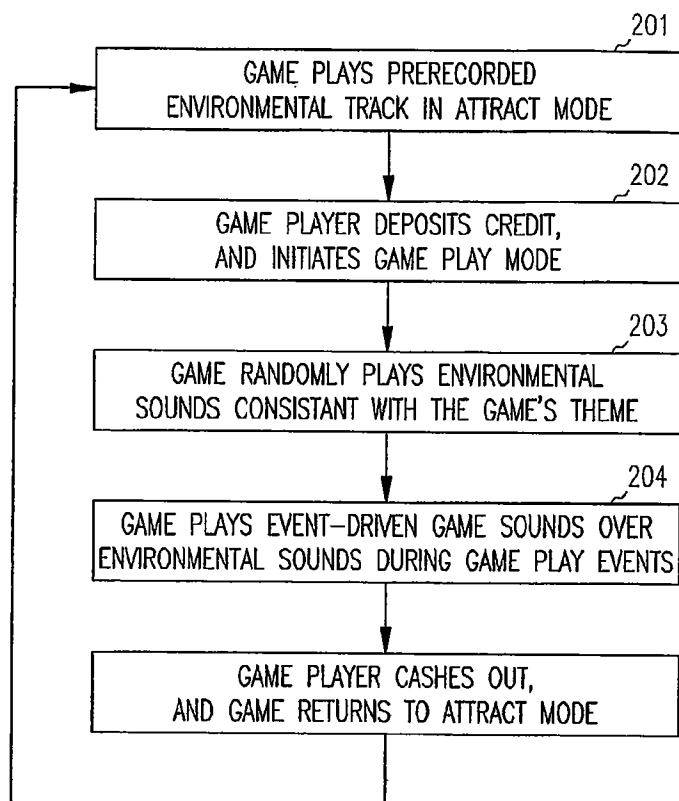
PCT

(10) International Publication Number  
**WO 2005/114598 A1**

- (51) International Patent Classification<sup>7</sup>: **G07F 17/32** (74) Agents: STEFFEY, Charles, E. et al.; P.O. Box 2938, Minneapolis, MN 55402 (US).
- (21) International Application Number:  
PCT/US2004/040813
- (22) International Filing Date: 7 December 2004 (07.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/570,552 13 May 2004 (13.05.2004) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: AMBIENT AUDIO ENVIRONMENT IN A WAGERING GAME



(57) Abstract: A computerized wagering game system comprises a gaming module that includes a processor and gaming code which is operable when executed on the processor to conduct a reel slot machine wagering game on which monetary value can be wagered. An audio module is operable to play an environmental audio track that comprises sound related to a theme of the computerized wagering game. The environmental audio track is played at a time not associated with specific game play events, such as reel spin or credit bang-up.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*

## AMBIENT AUDIO ENVIRONMENT IN A WAGERING GAME

### Field of the Invention

The invention relates generally to gaming systems, and more specifically  
5 to computerized slot gaming systems having an ambient audio environment.

### Background of the Invention

A wide variety of gaming devices are now available to gamers and to  
casino operators in computerized form, from slot machines to games that are  
traditionally played live such as poker and blackjack. These computerized  
10 games provide many benefits to the game owner and to the gambler, including  
greater reliability than can be achieved with a mechanical game or human dealer,  
more variety and animation in presentation of a game, and a lower overall cost of  
production and management.

Computerized video game systems must be designed with many of the  
15 same concerns as their mechanical and table game ancestors - they must be fair,  
they must provide sufficient feedback to the gamer to make the game fun to play,  
and they must meet a variety of gaming regulations to ensure that both the  
machine owner and gamer are honest and fairly treated in implementing the  
game. Further, they must provide a gaming experience that is at least as  
20 attractive as the older mechanical gaming machine experience to the gamer, to  
ensure success in a competitive gaming market.

Many computer elements have been employed in gaming systems, from  
computerized animation to playing prerecorded sounds through a gaming  
system's speakers. These are carefully designed, along with the general theme  
25 and other elements of a gaming system, to attract the attention of gamers and to  
provide a memorable gaming experience. But, because certain sounds associated  
with common actions repeat, or are only played at certain trigger points in a  
game, some sounds can become repetitive or predictable. In video or mechanical  
reel slot systems in particular, rotating reels are typically accompanied by

replayed music or rhythmic sounds. When a player plays the same reel slot game repeatedly, the sound repeats each time the reels spin, starting over for a few seconds and stopping again each time the reels spin. The sound can become not only repetitive, but can disrupt the flow of the game as it stops and restarts repeatedly. They further fail to provide a consistent audio environment, and typically bear no relation to the theme of a particular game. Such sounds often create a disjointed effect rather than contribute to the desired entertaining and enjoyable environment desired for game play.

It is therefore desired to employ a reel sound for slot systems presenting the game player with sounds designed to enhance the game play environment.

#### **Summary of the Invention**

The present invention provides in one embodiment a computerized gaming system. The system comprises a gaming module that includes a processor and gaming code which is operable when executed on the processor to conduct a reel slot machine wagering game on which monetary value can be wagered. An audio module is operable to play an environmental audio track that comprises sound related to a theme of the computerized wagering game. The environmental audio track is played at a time not associated with specific game play events, such as reel spin or credit bang-up.

#### **Brief Description of the Figures**

Figure 1 shows a computerized reel slot gaming system having an audio module consistent with an embodiment of the present invention.

Figure 2 is a flowchart showing a method of practicing an example embodiment of the present invention.

#### **Detailed Description**

In the following detailed description of sample embodiments of the invention, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration specific sample embodiments in which the invention may be practiced. These embodiments are

described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other embodiments may be utilized and that logical, mechanical, electrical, and other changes may be made without departing from the spirit or scope of the present invention. The following  
5 detailed description is, therefore, not to be taken in a limiting sense, and the scope of the invention is defined only by the appended claims.

The present invention provides in one embodiment a computerized gaming system having an audio module that is operable to play an environmental audio track that comprises sound related to a theme of the computerized  
10 wagering game. The environmental audio track is played at a time not associated with specific game play events, such as being specifically triggered by reel spin or credit bang-up. More detailed examples of the present invention are presented here to further illustrate how the present invention as claimed may be practiced in different embodiments.

15 Figure 1 illustrates a computerized reel slot machine gaming system having an audio module, consistent with an embodiment of the present invention. The computerized gaming system shown generally at 100 is a video gaming system, which displays information for at least one wagering game on video display 101. Alternate embodiments of the invention will have other game  
20 indicators, such as mechanical reels instead of the video graphics reels 102. The game of chance is played and controlled with various buttons 103, and in some embodiments also with a pull arm 104 to initiate reel spin. Value is wagered on the games, such as with tokens, coins, bills, or cards that hold value. The wagered value is conveyed to the machine through a changer 105 or a card reader  
25 106, and winnings are returned via the returned value card or through the coin tray 107.

When a game player deposits value into the gaming machine, the game typically exits an attraction mode and enters a game play mode. The attract mode is designed to play sounds and show images that attract potential gamers to

the machine, while the game play mode is designed to entertain a gamer who has already decided to play the machine. Both modes will in various embodiments benefit from the playing of audio tracks containing environmental sounds consistent with a game theme, as is explained in greater detail in the following examples.

One example embodiment of the present invention involves a game with a Hawaiian theme. Various tropical beach images are shown on the video display 101 and on a sign identifying the game, and are accompanied by environmental sounds consistent with the game's theme. These include the sound of tropical breezes, waves, and tropical bird calls, and other such environmental sounds associated with the game's theme. Another example involves a game with a fishing theme, which is accompanied by environmental sounds including croaking frogs, a casting fishing reel, blackbirds, splashing sounds from jumping fish, and other such environmental sounds.

Typical sounds in a slot machine are related to specific game events, such as a specific sound that indicates slot machine reels are spinning. This sound is started when the reel spin starts, and stops as soon as the reels stop spinning. Similarly, sound effects are commonly played to indicate bang-up or crediting the game player with credits won in a particular round of playing the game. Such sound effects usually bang once for each credit earned, or bangs repeatedly during the time it takes for credits to accumulate in the game player's credit count. Both the reel spin music and bang-up sound effects are examples of sounds that are not environmental sounds related to a theme of the game, but that are triggered by specific events in game play to indicate the status of the game or direct a player's attention to a specific game element.

The present invention seeks in various embodiments to play sounds via an audio module and speakers 108 that are consistent with the game's theme, to enhance the game's presentation of the game theme rather than to indicate a specific game event. The sounds are played in different ways in different

embodiments of the invention, including in a continuous loop, sequentially, or randomly. Further, multiple sounds may be played at the same time, to further enhance the naturalness of the environmental sound presentation. Using the previous fishing theme example, some implementations will play the sound of a frog croaking repeatedly at regular intervals, or will alternate the sound of a frog croaking with the sound of a blackbird chirping at regular intervals. Further implementations will add other sounds such as casting fishing reels at random times, and will be capable of playing multiple environmental sounds at the same time. Presenting the sounds randomly and in combination with other sounds adds to the richness of the environmental presentation, and avoids predictability present with a simple single prerecorded track that may lead to a game player losing interest in the game.

Figure 2 shows a flowchart of one example method of practicing the present invention. At 201, the game is in attract mode, and so plays a simple prerecorded environmental track looped continuously. A single track is used here for simplicity because repetition is not a great concern, since the goal of the attract mode presentation is to initially attract a game player rather than to keep the game player entertained over a period of time. The game player elects to play the game and deposits credit, entering game play mode at 202. The game then begins to randomly play environmental sounds consistent with the game's theme at 203, which continues as long as the game is being played. These tracks are played randomly in this example to provide a less predictable and more natural sounding audio environment to enhance the game's theme presentation.

Other sounds, such as reel spin sounds and credit bang-up sounds will likely also be played in most embodiments at 204, but will be triggered by specific events during game play rather than played independent of game play events to provide an entertaining theme-based audio environment. The game player cashes out at 205, collecting his winnings and causing the machine to exit game play mode. The game then returns to attract mode to attract the next game

player at 201, and plays the prerecorded environmental continuous loop track.

The environmental audio sounds played during game play mode in this example are not specific to any event within game play, such as to reel spin, credit bang-up, or other game play-related events, but vary with the game's mode, such as between attract mode and game play mode. In other embodiments, the environmental sounds will not vary, or will vary as the game changes mode in other ways, such as moving between different environments within a game's theme. Returning to the fishing environment as an example, a game may start with the sound of frogs and casting reels in presenting a small, quiet pond environment, but may change sounds to gulls, boat motors, and foghorns for an ocean fishing environment later in the game. Such a change may be triggered by a change in game mode, such as by changing to a bonus round or advancing in levels during game play, but is not related to specific game events such as initiating reel spin or banging up credits at the end of a reel spin.

The examples of the present invention discussed here illustrate how the present invention uses environmental sounds related to a wagering game's theme to enhance presentation of the theme. Although specific embodiments have been illustrated and described herein, it will be appreciated by those of ordinary skill in the art that any arrangement which is calculated to achieve the same purpose may be substituted for the specific embodiments shown. This application is intended to cover any adaptations or variations of the invention. It is intended that this invention be limited only by the claims, and the full scope of equivalents thereof.



### Claims

1. A computerized gaming system, comprising:  
a gaming module, comprising a processor and gaming code which is operable when executed on the processor to conduct a reel slot machine  
5 wagering game on which monetary value can be wagered; and  
an audio module, the audio module operable to play an environmental audio track, the environmental audio track comprising sound related to a theme of the computerized wagering game, wherein the environmental audio track is played at a time not associated with specific game play events, wherein specific  
10 game play events comprise at least reel spin and credit bang-up.
2. The computerized gaming system of claim 1, wherein the audio module is further operable to play at least one additional environmental audio track.
- 15 3. The computerized gaming system of claim 2, wherein the environmental audio track and the at least one additional audio track are played sequentially.
4. The computerized gaming system of claim 2, wherein the environmental audio track and the at least one additional audio track are played concurrently.  
20
5. The computerized gaming system of claim 2, wherein the environmental audio track and the at least one additional audio track are played randomly.
6. The computerized gaming system of claim 1, wherein the environmental  
25 audio track is played in a constant loop.
7. The computerized gaming system of claim 1, wherein the audio module is operable to play environmental audio tracks only when the wagering game is in play.

8. The computerized gaming system of claim 1, wherein the audio environment comprises sounds heard in nature that are related to the theme of the game.
- 5 9. A method of operating a computerized gaming system, comprising:  
playing an environmental audio track via an audio module of the  
computerized gaming system, the environmental audio track comprising sound  
related to a theme of the computerized wagering game, wherein the  
environmental audio track is played at a time not associated with specific game  
10 play events, wherein specific game play events comprise at least reel spin and  
credit bang-up, and wherein the computerized gaming system further comprises a  
gaming module comprising a processor and gaming code which is operable when  
executed on the processor to conduct a reel slot machine wagering game on  
which monetary value can be wagered.
- 15 10. The method of claim 9, further comprising playing at least one additional  
environmental audio track via the audio module.
11. The method of claim 10, wherein the environmental audio track and the at  
20 least one additional audio track are played sequentially.
12. The method of claim 10, wherein the environmental audio track and the at  
least one additional audio track are played concurrently.
- 25 13. The method of claim 10, wherein the environmental audio track and the at  
least one additional audio track are played randomly.
14. The method of claim 9, wherein the environmental audio track is played in a  
constant loop.

15. The method of claim 9, wherein the audio module is operable to play environmental audio tracks only when the wagering game is in play.
16. The method of claim 9, wherein the audio environment comprises sounds  
5 heard in nature that are related to the theme of the game.
17. A machine readable medium with instructions encoded thereon, the instructions when executed operable to cause a computerized gaming system to:  
play an environmental audio track via an audio module of the  
10 computerized gaming system, the environmental audio track comprising sound related to a theme of the computerized wagering game, wherein the environmental audio track is played at a time not associated with specific game play events, wherein specific game play events comprise at least reel spin and credit bang-up, and wherein the computerized gaming system further comprises a  
15 gaming module comprising a processor and gaming code which is operable when executed on the processor to conduct a reel slot machine wagering game on which monetary value can be wagered.
18. The machine-readable medium of claim 17, the instructions when executed  
20 further operable to cause the computerized gaming system to play at least one additional environmental audio track via the audio module.
19. The machine-readable medium of claim 18, wherein the environmental audio track and the at least one additional audio track are played sequentially.  
25
20. The machine-readable medium of claim 18, wherein the environmental audio track and the at least one additional audio track are played concurrently.

21. The machine-readable medium of claim 18, wherein the environmental audio track and the at least one additional audio track are played randomly.
22. The machine-readable medium of claim 17, wherein the environmental  
5 audio track is played in a constant loop.
23. The machine-readable medium of claim 17, wherein the audio module is operable to play environmental audio tracks only when the wagering game is in play.
- 10 24. The machine-readable medium of claim 17, wherein the audio environment comprises sounds heard in nature that are related to the theme of the game.

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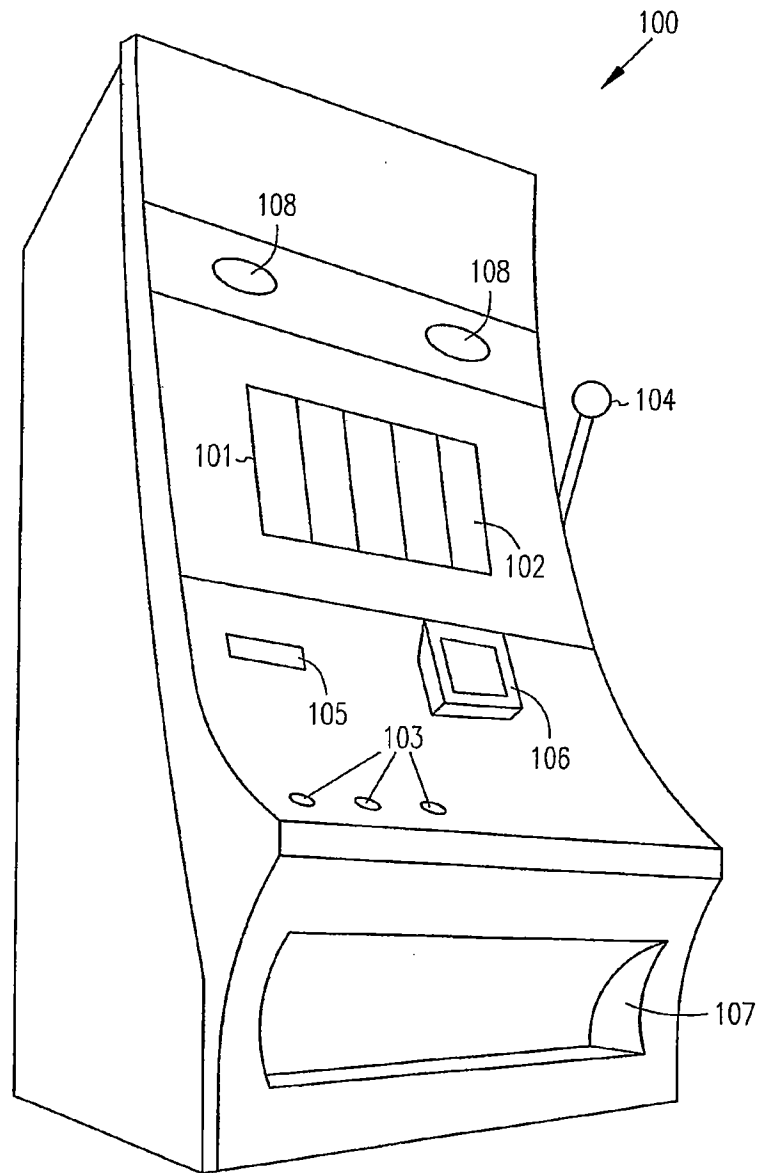


FIG. 1

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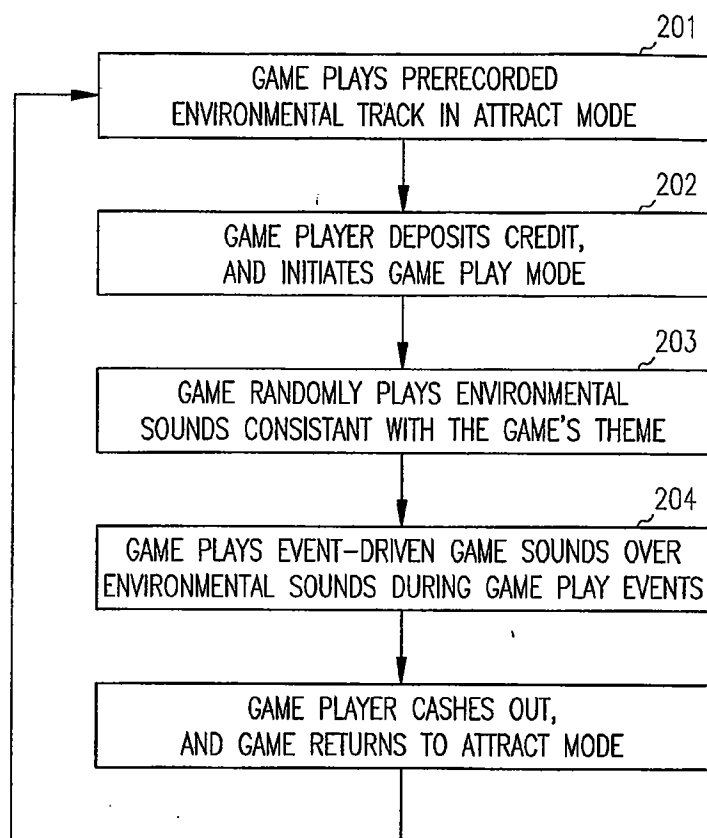


FIG. 2

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/040813

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G07F17/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07F G10H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/073491 A1 (HECHT WILLIAM L ET AL) 17 April 2003 (2003-04-17) paragraph '0005! - paragraph '0015! paragraph '0033! - paragraph '0059!	1-24
X	US 6 096 962 A (CROWLEY ET AL) 1 August 2000 (2000-08-01) column 2, line 31 - column 6, line 38	1-24
A	US 2003/037664 A1 (COMAIR CLAUDE ET AL) 27 February 2003 (2003-02-27) paragraph '0009! - paragraph '0014!	1-24
A	US 2003/119575 A1 (CENTUORI CHARLOTTE S ET AL) 26 June 2003 (2003-06-26) paragraph '0015! - paragraph '0018!; figure 4	1-24

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

22 March 2005

Date of mailing of the international search report

06/04/2005

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US2004/040813

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